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## THE YELLOW DAY LILIES

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## INTRODUCTION

For the gardener and plant lover, as distinguished from the commercial grower, many plants are invested with interest and value independent of their obvious qualities of merit and beauty. Such an interest gathers about all the yellow day lilies. Even the commonly despised tawny day lily, which so often has been cast out of gardens on to dump heaps, where it has established itself and spread, is a plant of romance, for the hand of man has carried it from its natural haunts in Asia and eastern Europe until now it is known over our own continent and acknowledged in many floras as an established exotic. For the scientist as well, it is a plant of singular interest, as it propagates itself freely by stolons and very rarely if ever by seed. Special studies of its sterility have been made, notably by A. B. Stout, of the New York Botanical Garden, who by patient effort has accomplished what once seemed impossible, the securing of seed from it by its own and other pollen.

Another old and widely distributed day lily is the lemon day lily, which also has been carried about by colonists until it, too, is well known throughout our continent. This, unlike the tawny day lily, has required no defender of its popularity nor herald of its beauty, which is admitted by all.

Other species have come into gardens more slowly and are less well known than they should be. Two, the Amur day lily, *Hemerocallis middendorffi*, and the early day lily, *H. dumortieri*, which also masquerades as *H. sieboldi* and *H. rutilans*, are now moderately well distributed, and the Japanese day lily, *H. thunbergi*, is slowly coming into popular regard; but the gorgeous orange day lily, *H. aurantiaca*, and the delicately scented but somewhat less robust citron day lily, *H. citrina*, are far from well known. All these are Asiatic species of

value for American gardens and will be described at some length hereafter, together with many hybrids derived from their interbreeding.

### BASIS OF VARIETAL SELECTION

Just as any wild plant must show some singular beauty or carry some special virtue of fruit or flower to warrant its introduction into cultivation, so these selected plants must show some particular reason for meriting the attention which promotes them into the more select ranks of the flower garden.

The day lilies have various claims to such recognition, but even their most ardent champion can scarcely hope to obtain for them the affection lavished upon the rose or the true lily. Their very resemblance to the latter flower is perhaps their first claim to recognition, for their exquisitely modeled yellow flowers are almost the counterpart of some of the lilies, although the plants and inflorescences are very dissimilar. In many cases they possess a fragrance as delicate as that of the lilies and similarly exhaled with particular sweetness in the cool of evening. Their colors show a range from the palest sulphur yellows through intense lemons to orange and rusty reds. Some of the hues are of a singularly luminous character—a quality of great importance to one who is planning color schemes in the perennial border.

For the gardener, whether professional or amateur, they combine three other qualities of prime importance: Permanence, tolerance of varied cultural conditions, and length of flowering season. The first two characters are, of course, interrelated, for under adverse conditions there could be no permanence. The only factors that appear to work hardship on these plants are extremes of summer drought and severe winter freezing of the semievergreen sorts. Both of these difficulties can be successfully overcome by the gardener if he chooses to supply water in dry seasons and uses a mulch of strawy litter for the tops during winter. Given these attentions, the day lilies are almost as permanent as peonies over our entire country.

By the selection of species and varieties, the season of blooming in the vicinity of Washington, D. C., can be extended over nearly all the summer months and even from late April to September. In the District of Columbia the main seasons of flowering occur during mid-May, in the latter part of July, and in the early part of August, and relatively few sorts flower profusely through the latter part of June. The middle of August sees the gradual decrease of bloom in the summer-flowering sorts. Interbreeding is being carried on in various places, and in time these gaps in the seasons should be filled by varieties intermediate in character between the sorts flowering in May and those flowering in July.

### TOLERANCE OF VARIED CULTURAL CONDITIONS

As has already been suggested in noting their permanence and ease of culture, these plants are tolerant of various conditions of soil, exposure, and climate. The natural preference is for a rich, moist garden soil, an open location with some shade during part of the day, and a climate that is neither excessively hot in summer nor cold in winter. Soils that are sandy and poor should be improved by the



liberal addition of well-decayed manure or other organic material that will supply food and assist in the retention of moisture. Heavy soils which are poorly drained should be lightened to prevent standing water and severe freezing. Shade can be provided either by planting where the shadows cast by trees or buildings will fall over the bed during part of the day or by the use of small flowering trees in the perennial borders. The day lilies, unlike many flowering perennials, will bloom with some freedom under trees where, in addition to the shade, they must suffer root competition for both food and moisture. Situations more open are to be preferred, but some shade is almost essential for summer flowering varieties of intense coloring, as the orange pigments are burned out by strong sunlight. These extremes of climate can not be controlled by man, but by a careful selection of varieties some can be found for either extreme, the entirely deciduous species like *flava*, *dumortieri*, and *middendorffi* being chosen for the North and the evergreen or semievergreen sorts for the South.

For extensive plantings outside the cultivated flower gardens, some of the more robust species and varieties should be used. These should be planted in masses as large as possible to obtain the best effect.

#### PROPAGATION

#### SEED PRODUCTION

Seed is rather sparingly produced by most species of *Hemerocallis*, even when hand pollination is practiced, for although many pods are formed, the seeds contained are often few in number. (Fig. 1.) It

is rarely offered in the trade catalogues. It should be gathered as soon as the capsules show signs of bursting and may be sown at once or stored in a dry, cool, mouse-proof place until the following spring. The early-flowering sorts ripen seed during July, and as germination is rapid, often within 10 days, the seed may be sown at once to advantage. The small plants resulting by fall should be protected from heaving during the winter, but they are otherwise rather hardy. If they have not been transplanted the first summer they should be spaced in lines in the vegetable or cutting garden and grown to flowering size. There is considerable variability in the length of time for this, but many seedlings flower after two full seasons of growth. Nearly all the seedlings from chance pollinations are

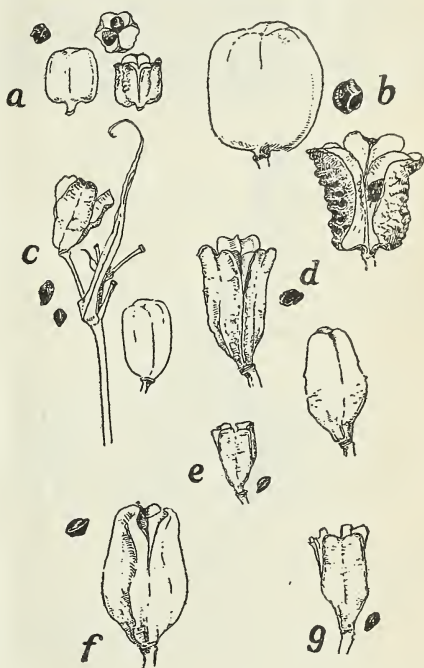


FIG. 1.—Seeds and capsules of day lilies.  
a, *Hemerocallis dumortieri*; b, *H. flava*;  
c, *H. minor*; d, Florham; e, *H. citrina*;  
f, *H. aurantiaca major*; g, *H. thunbergi*

useful for garden decoration, but few show any great improvement over the parents, so seeds are not worth saving except from species, which alone reproduce truly from seed.

The seeds of the summer-flowering sorts can be sown in pots or flats and wintered over in a coldframe or stored dry and planted the following spring. If they are sown at once, considerable germination occurs within 14 to 21 days, and the seedlings will require the protection of a frame to prevent winterkilling from heaving.

#### DIVISION OF CLUMPS

The day lilies are obtained from nurseries as plants and may be ordered for delivery either early in the spring as growth starts or late in summer after their flowering. In the event of summer planting, care must be taken that there is enough water in the soil to produce immediate root action so that the plants may be established



FIG. 2.—Propagation of day lilies. Stolon of *Hemerocallis fulva* and seedlings of *H. dumortieri*

before winter. For the first winter a light mulch of straw will be helpful even to those sorts that are entirely hardy when established.

After these plants have been growing in the borders, they need not be disturbed until the clumps begin to fail in flowering. They should then be lifted, divided, and reset after the soil has been well enriched. This fertilization can be postponed considerably by deep preparation of the soil at the first planting and the annual addition of well-decayed manure dug into the soil in the spring.

There are two species (*flava* and *fulva*) that are stoloniferous in their growth and so may be divided easily by pulling apart the loose clumps. (Fig. 2.) The other species and varieties form rather dense clumps, which should be lifted with a digging fork to avoid injuring the fleshy roots and divided by cutting the somewhat woody crowns apart with a sharp knife. With the most robust species, this division can often be carried on until each fan of leaves is separated from the others, but not so far that there are insufficient feeding roots on each

piece. A little experience in division will soon show the best practice. Particular care must be taken to establish divisions by good culture after replanting, or they may make new growths so slowly as to remain flowerless for a year or more. Division may be practiced either in the spring or in midsummer. In summer transplanting, the leaves should be cut to half their length, as is done in transplanting iris.

After division and replanting in the summer, it sometimes happens that the deciduous species make no new leaf growth until the following spring and look as if they were dead or dying. The semievergreen sorts usually make a considerable growth of new leaves, which remain green through the winter provided they are fully matured before frost.

In planting or replanting, the root should be placed so that the base of the leaves is about 2 inches below the surface of the soil. The plants should be spaced about a foot apart each way for those that are cut to single divisions and 15 to 18 inches apart for small clumps.

### CHOICE OF VARIETIES

It is inadvisable to lay down any definite list of varieties for general use. This is particularly true of the named horticultural varieties. At the present writing these are relatively few in number as compared with the hosts of named narcissus, tulip, dahlia, rose, or iris, but they comprise plants that are likely to be of relatively permanent value as well as forms that will surely be supplanted in time by plants of improved habit or style.

For the small garden, the varieties and species that should not be overlooked might well include the following: Spring flowering—*flava*, *middendorffi*, Apricot, Gold Dust, and Queen of May; summer flowering—Florham, Luteola, Sir Michael Foster, *aurantiaca major*, and *thunbergi*, together with any of the commercial strains of *citrina* hybrids.

A brief résumé of the species and varieties available follows, with an indication of other sorts possibly forthcoming. Unless specially noted, all have been grown in the writer's garden near Washington, D. C., and treated as any amateur might handle his plants.

In addition to a considerable number of seedlings as yet unnamed, the varieties here listed have been grown for these studies. The varieties that are not mentioned in the text have not been under observation a sufficient length of time to warrant their inclusion in this circular. Only those named in italic type represent species and their forms; the others are garden hybrids.

Ajax, Apricot, *aurantiaca*, *aurantiaca major*, Aureole, Baroni, Chrysolora, *citrina*, Citronella, *dumortieri*, Erika, Estmere, Flame, Flamid, *flava*, *flava major*, Florham, *fulva*, *fulva cypriana*, *fulva maculata*, George Yeld, Globe d'Or, Golconda, Gold Dust, Gold Imperial, Gold Standard, Kwanso, Lady Fermoy Hesketh, Lemon Queen, Luteola, Luteola Grandiflora, Luteola Major, Luteola Pallens, Luteola Pallida, Mandarin, Meehani, *middendorffi*, *minor*, Mrs. Perry, Ochroleuca, Orangeman, Mary Queen, Queen of May, Royal, Sir Michael Foster, Sovereign, Tangerine, Thelma Perry, *thunbergi*, Yellow Hammer.

### DESCRIPTIONS OF SPECIES AND VARIETIES

The species now available in the American trade are relatively few as compared with the named hybrids. They are all excellent plants and worthy of garden use, with the possible exception of the tawny



day lily. In the following text, the species will be described first divided into the two groups, early and late flowering, and the hybrids will be likewise listed and similarly divided. Several of the hybrids have names that might suggest a specific character, as, for example, *Ochroleuca*, *Baroni*, *Luteola*, but the crosses are recorded, so there can be no question.

#### EARLY-FLOWERING SPECIES

There are four species that come almost simultaneously, but with approximately the following order: *Middendorffi*, *minor*, *flava*, and *dumortieri*. The season causes some variation, principally showing as an exchange in places of *flava* and *dumortieri*.



FIG. 3.—Early-flowering *Hemerocallis*. A, *H. flava*; B, *Queen of May*; C, *Sovereign*; D, *dumortieri*; E, *Gold Imperial*; F, *Ajax*; G, *Thelma Perry*; H, *Aureole*

The Amur day lily, *Hemerocallis middendorffi* Trautv. and Mey., makes dense tufts of yellow-green foliage about 14 inches high, through which are borne the flowering stalks barely overtopping the leaves. The inflorescence is a crowded head surrounded by conspicuous bracts. The flowers are 6 to 10 in number, opening successively. The color is cadmium yellow of a pure and luminous quality, contrasting well with such purple tulips as *Velvet King*, and the white of columbines, particularly the double white *vulgaris*, and is almost identical in color with a golden wallflower (*Cheiranthus allioni*). The almost scentless flowers are more cupped and less trumpet shaped than those of most day lilies. The foliage is deciduous and in dry situations dies off rather early in the season. Seed is produced abundantly, but propagation by division is more rapid. This plant is sold at times as "Dr. Regel."



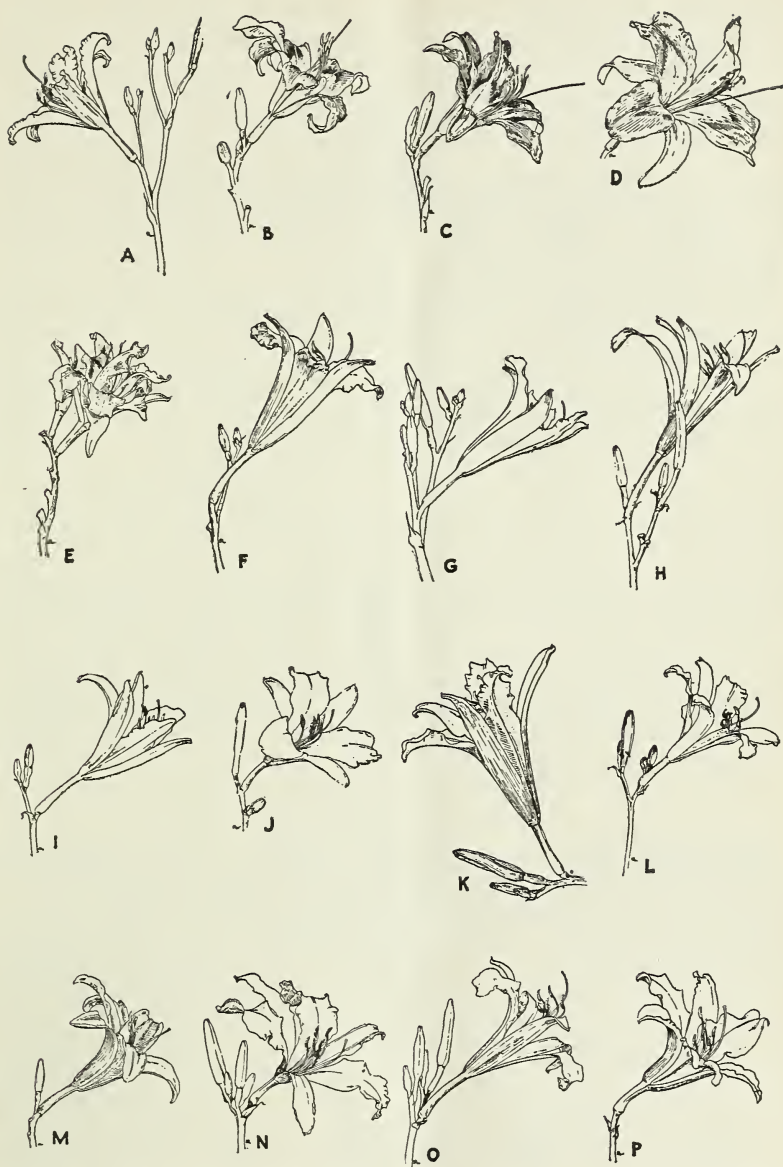


FIG. 4.—Late-flowering *Hemerocallis*. A, *H. thunbergi*; B, *fulva*; C, Maggie Perry; D, George Yeld; E, *fulva* var. Kwanso; F, *citrina*; G, *Ochroleuca*; H, *Globe d'Or*; I, *Baroni*; J, *Lady Fermoy Hesketh*; K, *Sir Michael Foster*; L, "*citrina* hybrid"; M, *aurantiaca major*; N, *Luteola Pallens*; O, *Luteola Pallida*; P, *Luteola Major*

The dwarf day lily and the early day lily (*Hemerocallis minor* Mill. and *Hemerocallis dumortieri* Morren) may be considered together, as aside from certain technical differences the first might be regarded as a diminutive form of the latter. The plants form low dense clumps of about the same stature as *middendorffi*, but produce inflorescences that are more spreading or overarching and are branched and not capitate. The flowers are lilylike in shape, deep chrome to cadmium yellow with brownish stains on the backs of the three outer segments. As all the segments are relatively narrow, the flowers are more starry in appearance than *middendorffi*. These species seed rather sparingly, but are easily propagated by division. The foliage is deciduous. *H. dumortieri* is occasionally listed as *H. rutilans* or as *H. sieboldi*.

The lemon day lily, *Hemerocallis flava*, was named by Linnaeus in the second edition of the *Species Plantarum*, in 1762. In the first edition, published in 1753, he used the name *Hemerocallis lilioasphodelus*, which technically is the proper Latin name for this species. This is the familiar "lemon lily" of old gardens. Unlike the preceding odorless species, it is very sweetly scented. It forms loose clumps of dark-green arching foliage and spreads rather widely by underground stolons. The flower stalks rise about 3 feet in height, taller or shorter according to the richness and moisture in the soil, and branch rather widely at the summit. The flowers are of exquisite lilylike shape and are a clear lemon-chrome color. The plant seeds somewhat sparingly, producing very large almost globular capsules which contain a few rather large seeds. Increase by the removal of stolons is to be preferred. This species flowers more freely and is more content in moist soil than the preceding species and is particularly lovely when planted near pale-lavender iris.

There is a stronger growing form known as *flava major* which is even more desirable than this type because of its large growth and longer flowering season.

#### LATE-FLOWERING SPECIES

The summer-flowering species now available, in their approximate order of flowering, are *fulva*, *aurantiaca*, *thunbergi*, and *citrina*. In beauty they are somewhat overshadowed by their hybrids.

The tawny day lily, *Hemerocallis fulva* L., is the tawny day lily most widely distributed over the world. It forms dense clumps of strong-growing foliage and spreads by wide underground stolons too aggressively for general garden use. Its branching stalks rise as high as 4 feet and produce flowers successively through July. The color varies somewhat, but is a tawny red over the yellow of the petals and becomes most intense at the arrow-shaped zone which defines the yellow base of the segments. There is considerable difference in the pigmentation of *fulva*, with a predominance of paler forms. The plant is practically sterile and is propagated by division. The foliage is almost evergreen.

There is a double form usually listed either as *disticha* or Kwanso which is identical in all ways, save that it is later flowering, blossoming well into August and flowering beautifully with white phlox and various buddleias.

There is also a form with variegated foliage.

Various plants are to be obtained in the trade under the name of orange day lily, *Hemerocallis aurantiaca* Baker, all of which rather closely approximate the description of the species. The true species is very similar to *fulva* in its general habit but is neither stoloniferous nor sterile. The bright orange flowers are large, opening so widely as to appear somewhat starry. It flowers during July and continues into August. As there are many flowers on the branched inflorescences, it makes a splendid display when the clump is well established and of some size.

The plant most commonly received in place of *aurantiaca* is *aurantiaca major*, a dwarfer plant with flowers more similar in shape and pattern to those of *fulva* but of a paler and more agreeable hue, as they possess none of the purplish quality that mars the rusty red of *fulva*. Until this is well established so that many flower stalks are produced in one clump, it is not especially showy in the garden, as its color does not carry so brilliantly as the lighter yellows, but shows as an apricot yellow. It is less tall, rarely exceeding 2 feet. As it makes a considerable growth of evergreen foliage in the fall, it should be planted in a well-drained soil and given the protection of rather loose straw or litter. If it is left unprotected the leaves are so badly injured that the plant suffers in vitality. Like the type, this is neither stoloniferous nor sterile.

The Japanese day lily, *Hemerocallis thunbergi* Baker, is commonly described as "similar to *flava*, but later flowering." Superficially this is true, but even if they flowered together this plant would be differentiated by its more slender leaves and its taller, more slender flower stalks, which are widely branched and bear flowers much paler and of a more greenish yellow than those of *flava*. The flowers are sweetly scented, and during hot weather often open in the evening and last until the following evening, a tendency showing in many of the summer-flowering varieties. The plant does not spread by stolons, but must be increased by division.

The citron day lily, *Hemerocallis citrina* Baroni, is a true evening bloomer, opening its flowers about 6 o'clock and closing them before noon the next day. In general habit it is much like *thunbergi*, but the inflorescence is less branched. The flowers are larger, longer, and more trumpet shaped. They are slightly deeper in hue and are even more delightfully scented. The foliage is semievergreen. The plant is reported to be half hardy, but has endured without protection in the writer's garden (near Washington, D. C.). It is not showy in the border until it has become a fair-sized clump.

None of the late-flowering species should be judged from the flowering of newly planted roots. As their increase is less rapid than the early-flowering species, it is the usual nursery practice to divide them into single fans of leaves. These require several years before the clumps become fully established and strong enough to show six or more stalks of bloom with a full quota of flowers on each.

#### EARLY-FLOWERING GARDEN VARIETIES

The hybrids in the group of early-flowering garden varieties are fairly numerous. More have been produced than are to be found in current nursery lists. Every effort has been made to obtain all



available by purchase and through the generous gifts of several amateurs. In general terms, they fall into three groups, according as they show the predominating influence of *middendorffi*, *dumortieri*, or *flava*. There are several others which give the appearance of the influence of some of the late-flowering species.

Apricot, one of the most charming horticultural sorts, is a hybrid long known to the trade which, by the type of inflorescence and shape of the flower, suggests its derivation from *middendorffi*. It resembles this plant in all respects, but is larger, later, and of a paler color. The foliage is deciduous. It seeds sparingly, but is easily divided, although there are no stolons.

Gold Dust, Orangeman, Flamid, and possibly Estmere suggest crosses between *flava* and *dumortieri*. All are vigorous in growth, producing dense tufts of dark-green foliage with abundant overarching, somewhat branched inflorescences. The flowers resemble those of *dumortieri* in general style but are larger in all their parts. The leaves are deciduous, and there is no increase by stolons. Gold Dust will produce some seed, but Orangeman is apparently sterile. The former is pale yellow with brown-stained buds; the latter is deeper orange in color, with very little brown on the reverse. This absence of outer color makes a marked difference in the appearance of the clump in the garden, so that the flowers, although similar when near by, show quite differently in color effect at a distance. The varieties Flamid and Estmere resemble these, but they are not offered in this country to the writer's knowledge. Tangerine, which was developed about the same time, is a more desirable sort and should be imported. Its chief asset is its deep-orange color, which is not represented in any other variety flowering at this time.

Sovereign and Royal are the two sorts whose buds are stained with brown as in *dumortieri* but whose segments are broader and smoother, suggesting more the influence of *flava*. Both are charming and desirable plants, although somewhat similar. They are slightly scented.

The remaining forms, Ajax, Aureole, and Queen of May, all carry larger, heavier flowers, such as are to be found in the late-blooming group. All are intense yellows. The first and the last are the more beautiful, whereas Queen of May is the last of the three to flower.

The Meehan day lily, another plant of unrecorded hybrid origin, received as *Hemerocallis meehani*, follows these and reaches its peak of flowering before the late-blooming group is at its height. In general appearance it suggests *aurantiaca major*, but its flowers are paler in hue and do not show the clear base of the petals. It is moderately free flowering, but is valuable chiefly as a possible bridge between the early and late groups.

Several new sorts flowering between seasons, developed recently in England, have flowered in the writer's garden. Of these the variety Queen Mary is perhaps the most conspicuous, resembling the variety Meehan but having rather better form. Very tall stemmed and striking is Gold Imperial, with large pale-yellow flowers of rather starry form. Thelma Perry flowers late in June with lemon-yellow lily-shaped flowers much like the later-flowering *citrina* hybrids. More like Gold Imperial, but distinct in its trumpet shape, is the yellow-hued Yellow Hammer.



There are others that flower between these last members of the early group and encroach on the season of the summer-flowering group. The most conspicuous of these is the large and very handsome variety George Yeld, named for the originator of many of the older sorts. It is shown in Figure 4, D. Its colors are a rather brilliant orange over yellow, with red-orange patches on the three inner segments.

#### LATE-FLOWERING GARDEN VARIETIES

The late-flowering varieties come into bloom in two groups that overlap considerably. In July, Florham, Sir Michael Foster, and Luteola with its several varieties are the chief contributors to the garden color, but before they are over, the derivatives of *citrina* bloom and last through August and often into September. The earlier of these two sets contains on the whole the more brilliant flowers, but the second group is valuable for the usual height of the flower stalks and the fragrance of the blossoms.

Florham is a variety of American origin which forms large clumps of half-evergreen foliage from which the stalks of flowers rise to a height of 4 feet or more. The flowers are large and of fine form, with ruffled segment edges. They are sweetly but not strongly scented. Florham should be increased by division.

Sir Michael Foster is a cross of *aurantiaca major* and *citrina* and bears the largest flowers of all. They are huge starry trumpets of delicate empire to apricot yellows. The plant is half evergreen, produces no stolons, and is rather slow of increase.

Luteola is the name given to a hybrid of *thunbergi* × *aurantiaca major*, while Luteola Major is the result of the reciprocal cross. The two plants are much alike, similar to Florham except for the deeper color of the flowers, but perhaps a little less fine. Luteola Pallens, a cross of *citrina* and *thunbergi*, and Luteola Grandiflora are less happily named, for they differ from Luteola far more than the names might suggest. The first is more starry in shape than either of the first two and does not reach so great a height. Luteola Grandiflora is somewhat finer than the others, and the shape of the flowers suggests that of *fulva* or *aurantiaca major* rather than the more trumpetlike Luteola. But whatever the reasons for grouping, the four make excellent garden plants, especially when they are well developed.

During July also blooms the *fulva* hybrid known as Maggie Perry. It very much resembles *fulva cypriana* in color and form and differs from the typical *fulva* only in its darker red color and the sharply defined yellow bases of the petals. It is valuable chiefly in extending the color range of the family in the darker hues.

While these are still in full bloom, the first flowers of Ochroleuca, Baroni, Lady Fermoy Hesketh, and the unnamed hybrids of *citrina* offered in at least one strain, commence to open.

Ochroleuca and Baroni are products of the same cross and are very similar. The first is the better of the two, with larger flowers slightly more expanded. It increases very rapidly and appears to bear transplanting better in the spring than in the fall. Both are hybrids of *thunbergi* × *citrina*, and both are evening bloomers. Lady

Fermoy Hesketh very closely resembles *citrina* itself, but opens in the morning and has rather broader perianth segments. It has a very long flowering season. The "*citrina* hybrids" known to the writer are all very tall plants, some being 50 inches tall, with rather small starry flowers of pale greenish yellow. Some open in the evening and some are day bloomers. All are delightfully scented, as are the other *citrina* hybrids. The foliage is entirely deciduous, and there are no stolons. Although there has been no published statement, certainly *thunbergi* must have been the other species involved. They produce a large number of flowers on a stalk and as they commence to flower late are valuable for continuing the season of bloom. Another plant obtained under the name Globe d'Or obviously belongs in this section, although the writer has been unable to obtain any history of the plant. It is an evening bloomer of no special value save the lateness of the season of flowering.

#### HYBRIDS UNDER TRIAL

There are numerous plants, some named and under trial and others not yet introduced, which will undoubtedly add to the value of this family. Doctor Stout's work has already been mentioned. Amos Perry in England has made numerous additions to the variety list, Carl Betscher has important sorts to introduce, and several amateurs are at work in this country.

• As might be expected in so small a group, the improvements will have to be critically studied, and the variations that may arise in the limited range of color, size, form, and time of flowering will have to be well marked to be worthy of consideration.

#### VALUE AS A GARDEN PLANT

The writer's interest in yellow day lilies developed from the use of the early-flowering sorts to supplement the yellow varieties of iris in mixed perennial borders where the brilliance of their colors is of great value in contrast with the delicate lavenders and purples of the iris, and their arching grassy leaves accentuate the erect swordlike thrust of the iris leaves. They show as desirable contrasts with the leaves of phlox, funkia, delphinium, and peony and make a valuable addition to the foliage textures of the border.

The range of this color, however, from pale-yellow to intense reddish orange presents some difficulties. As suggested in Farmers' Bulletin 1406,<sup>1</sup> the yellow day lilies should not be planted near the mauve and pinkish iris varieties nor near the deep-colored peonies. Where they overlap the season of the early delphiniums or any of the white flowers of the border the effect is delightful. The same conflict with mauve must be borne in mind for the season that produces both phlox and monarda. The whites and palest pinks of phlox are very charming near the pale-sulphur forms like *thunbergi* and the various *citrina* hybrids, but the deep-purplish colors in phlox and the intense reds of monarda work havoc with the yellows and orange of the day lily.

<sup>1</sup> MORRISON, B. Y. GARDEN IRISES. U. S. Dept. Agr. Farmers' Bul. 1406, 46 p., illus. 1926.

The summer-flowering forms are of the greatest value to the garden designer for their height, many of the stalks rising to more than 4 feet even in rather dry soils. A good-sized clump of these slender reedlike stems rising from the clump of arching foliage and crowned with myriads of pale-yellow lilylike flowers becomes a notable feature of the summer border. Planted in large masses near shrubbery groups of buddleia, hibiscus, and summer-flowering hydrangeas, they make desirable features in naturalistic plantings.

# ORGANIZATION OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

October 11, 1928

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